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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,712	02/05/2004	Yu-Chou Lee	250323-1050	5613

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EXAMINER

OKEZIE, ESTHER O

ART UNIT	PAPER NUMBER
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3654

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,712

Applicant(s)

LEE ET AL.

Examiner

Esther O. Okezie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The Applicant's arguments filed 5/23/2005 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by White et al. White et al discloses a substrate transfer shuttle for transferring and supporting glass substrates, the transfer shuttle comprises a main body (42) and substrate support fingers (86A, 88A, 86B, and 88B), each finger having pads (94) for supporting a substrate held by the shuttle. The pads are made from quartz (fig. 2D, col. 7, lines 25-44).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al in view of Hiroki et al.
2. Re claims 1-6, Thomas et al. discloses an end effector for handling semiconductor substrates comprising a main body (platform 14) and pads allocated on the main body to support a substrate. Thomas et al teaches the use of simple bump structures or O-ring pads (24) composed of physically resistive material including quartz or other materials that contribute low friction, low contamination, and low damage levels to a substrate ("To avoid back-side contact, a wafer is supported by the O-rings 24 which touch only the outer edge of the exclusion zone. Such o-rings 24 attach to the blade platform 14 and provide a frictional surface to prevent wafer slippage as the contacts 32,34 release the wafer..." (col. 2, lines 46-52; col. 3, lines 25-30; col. 4, lines 57-64). These quartz pads would be suitable for carrying substrates made of glass or quartz which are well known in the art of liquid crystal display manufacturing, in fact, glass substrates are often referred to as LCD substrates. However, Thomas et al. does not disclose a glass substrate.

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Hiroki et al discloses a multi-chamber system for transferring and processing large and small LCD glass substrates. Hiroki et al describes the problems that reduce productivity of substrate manufacture including contamination during transfer by o-rings typically made of silicon rubber in which particles from the o-rings adhere to the substrate causing damage and contamination or the frictional force of the o-rings is too weak to hold the substrate during transfer leading to substrate slippage (col. 1, lines 12-53, col. 2, lines 14-36, 46-50; col. 17, lines 55-60).

Accordingly it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the end effector of Thomas et al. to support glass substrates as taught by Hiroki et al. as the use of glass or quartz substrates are well known in the art for use in numerous applications including liquid crystal display (LCD).

Response to Arguments

Applicant's arguments with respect to claims 1-6 have been fully considered but they are not persuasive. The applicant has argued that the combination fails to disclose or suggest certain features of the claimed invention and the cited art fails to teach or suggest that pad's material is similar to that of the substrate so as to avoid damaging electronic devices on the substrate by electrostatic charges.

In response to applicant's arguments, the recitation "for preventing electrostatic damage" has not been given patentable weight because the

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recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

White et al discloses the claimed features including glass substrates and quartz pads, because quartz is chosen as the material for the pads due to temperature concerns does not render the reference irrelevant. The claimed features are disclosed.

Thomas et al discloses quartz o-ring pads for low friction support of substrates. Electrostatic damage, as disclosed by the applicant, "the sources of the electrostatic damage hence are inferred to result from the electrostatic charges produced by the friction forces during transport process" (Applicant's disclosure; page 4, lines 18-20). It would follow that since quartz o-rings were chosen by Thomas in order to provide a material with low-friction, the o-ring pads would inherently reduce electrostatic damage which "is produced by friction forces during transport."

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

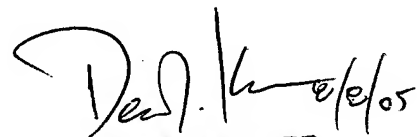
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Esther O. Okezie whose telephone number is (571) 272-8108. The examiner can normally be reached on Mon-Thurs 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katherine A. Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EOO



DEAN J. KRAMER
PRIMARY EXAMINER